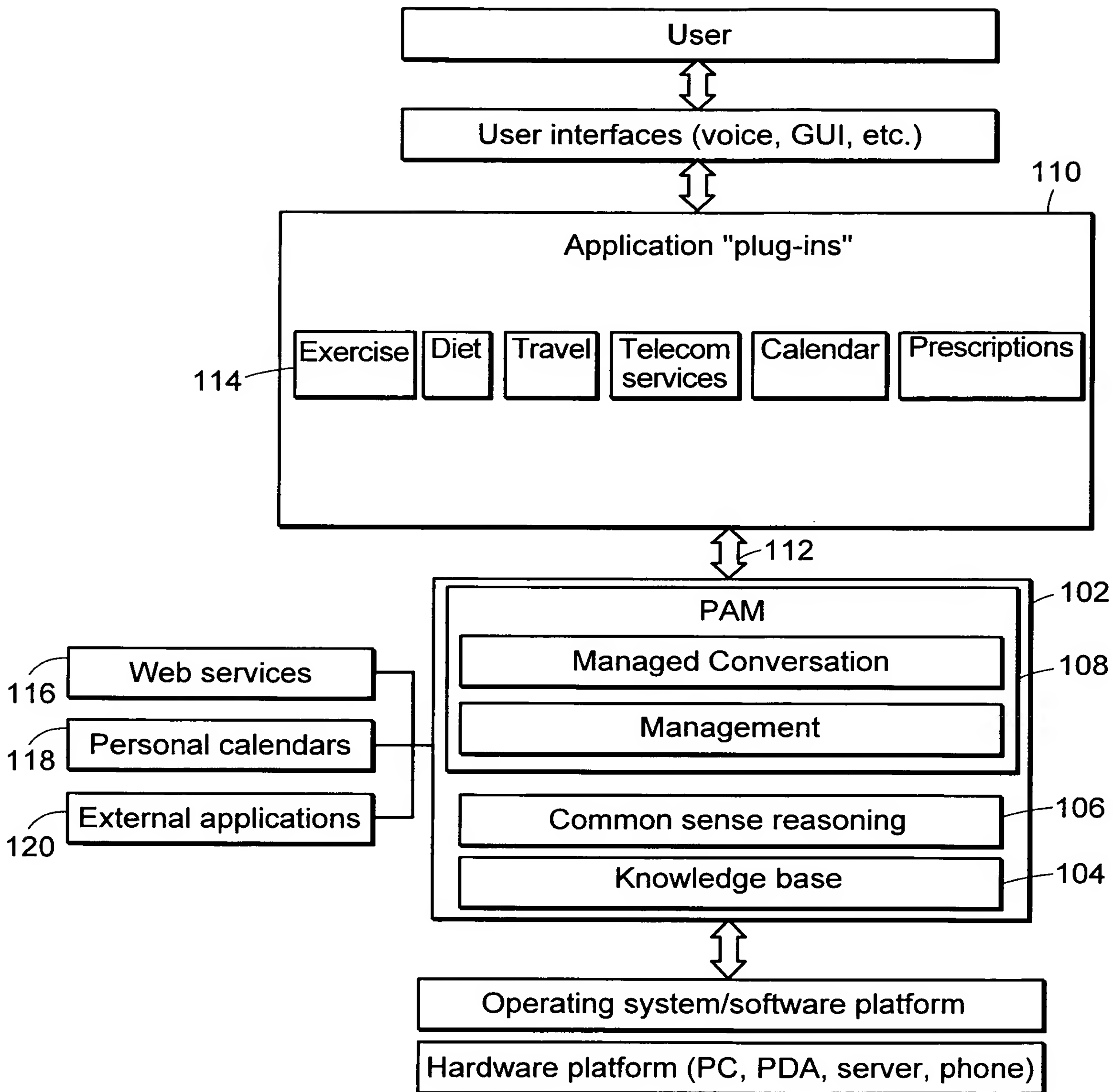




1/21



Exemplary architecture

100

FIG. 1

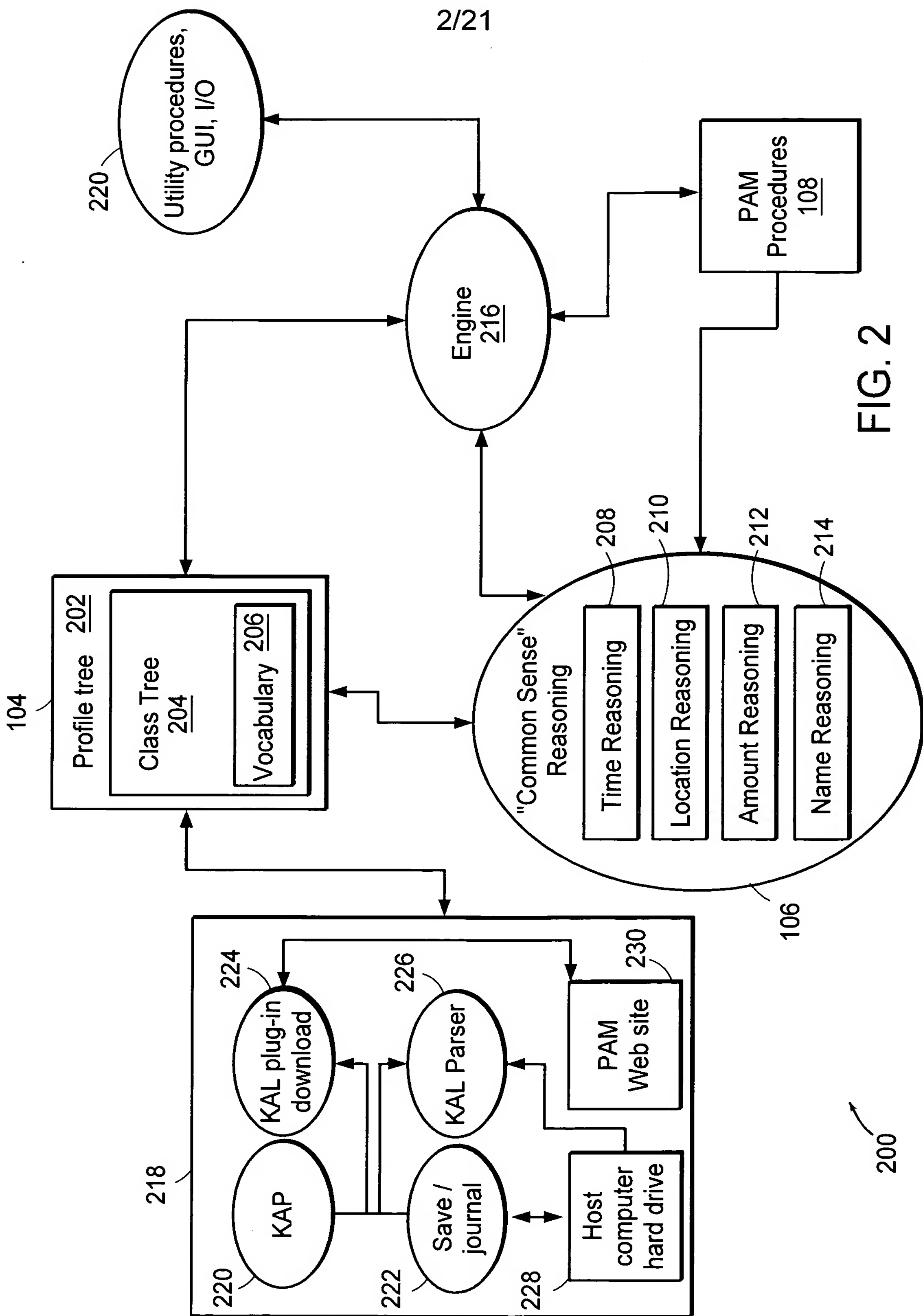


FIG. 2

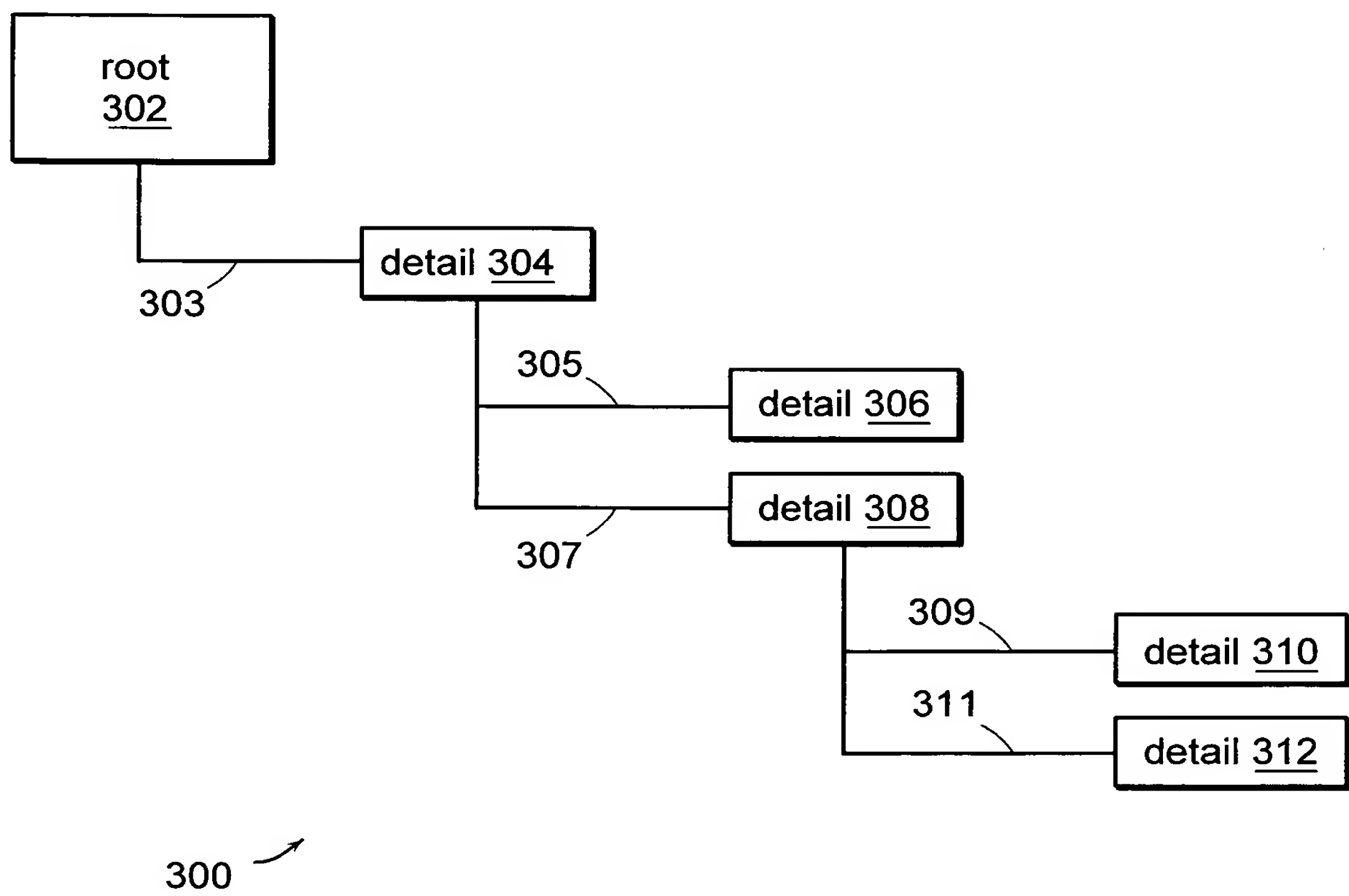


FIG. 3

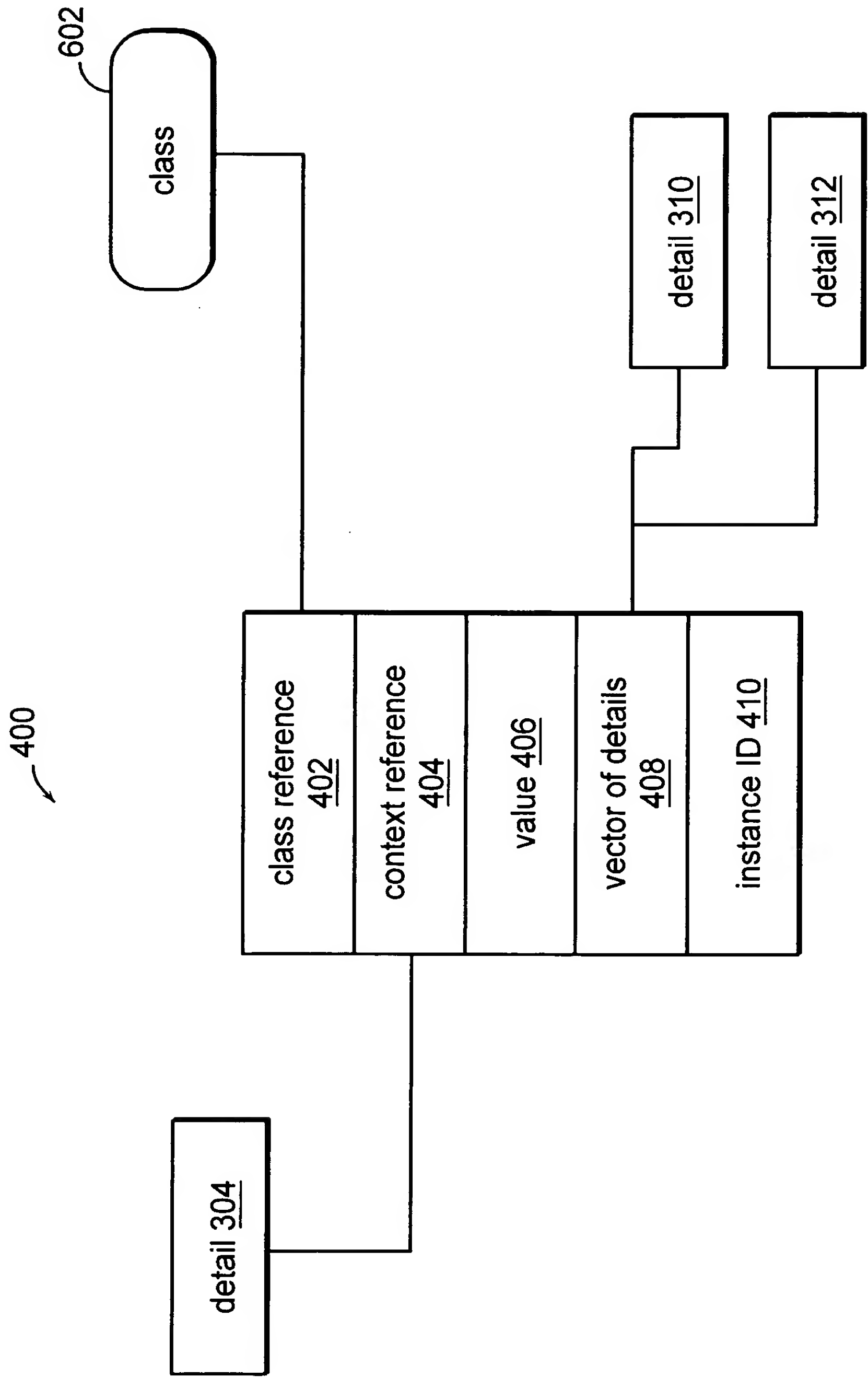


FIG. 4A

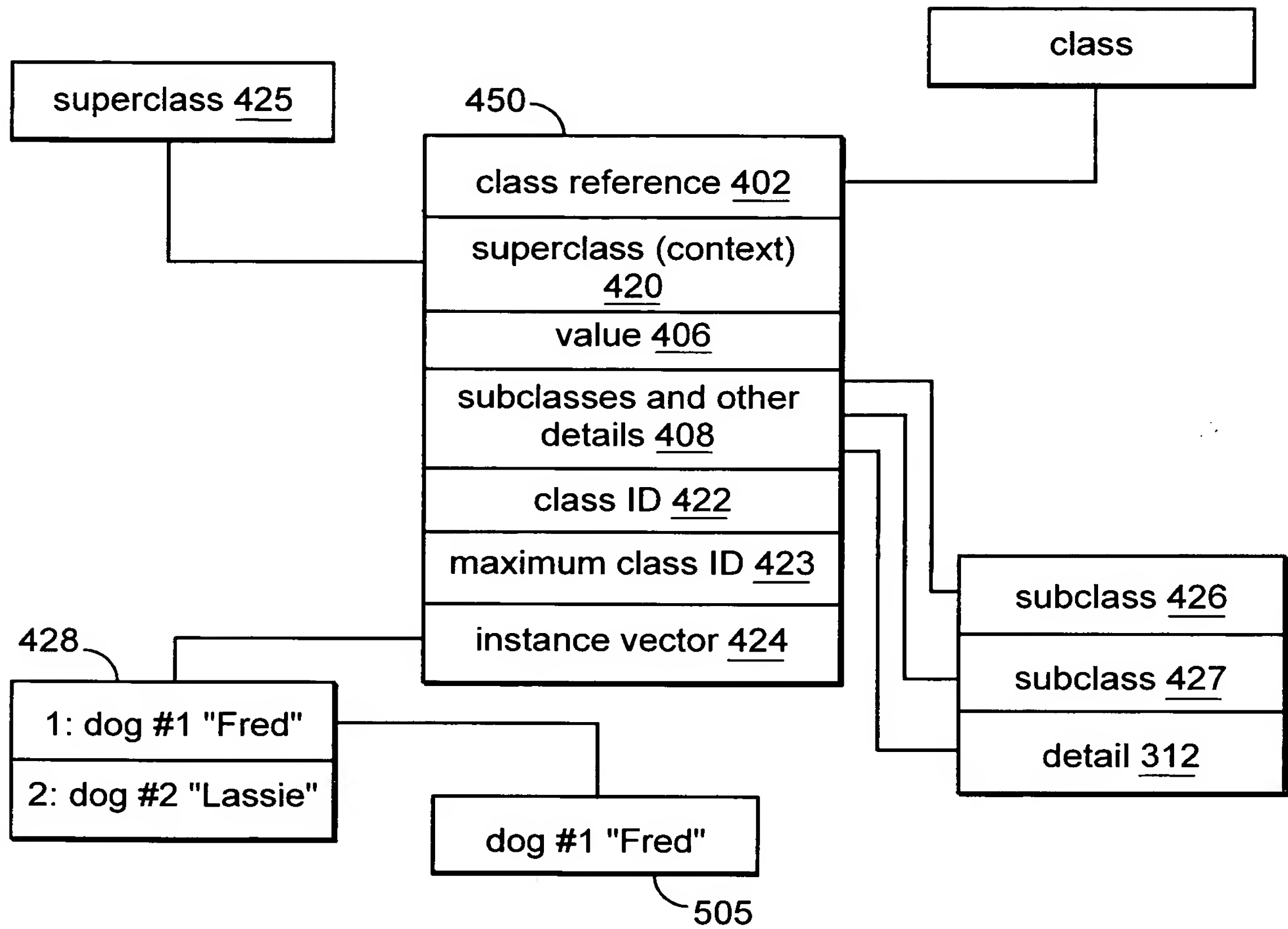


FIG. 4B

6/21

```
root "PAM profile":
  root "PAM class tree":
    602  thing::
    604    name::
    605    synonym::
        type::
        string::
        number@type::
    606    color::
    515      qualifier: color
    608      black::
    609      red::
    610      size::
        qualifier: size
    612      big::
    614    owner::
    616    class::
    618      word class::
    620        primary word class::
    622        secondary word class::
    624      qualified class::
    626        string qualified class::
    628        number qualified class::
    630        color qualified class::
    632        size qualified class::
    living thing::
    animal::
    634      mammal::
    636      person::
    638      canid::
    640      dog::
    516        synonym: "hound"
    642        black dog::
    644        big black dog::
    645        red dog::
    646      domestic animal::
    648      pet::
    501        inverse relation: owner
    502  root "User data":
    503    person #1 "Alan Turing":
    504      pet: dog #1 "Fred"
    505    dog #1 "Fred":
    508      owner: person #1 "Alan Turing"
    506      color: black
    507      size: big
    510      class: show dog
```

FIG. 5A

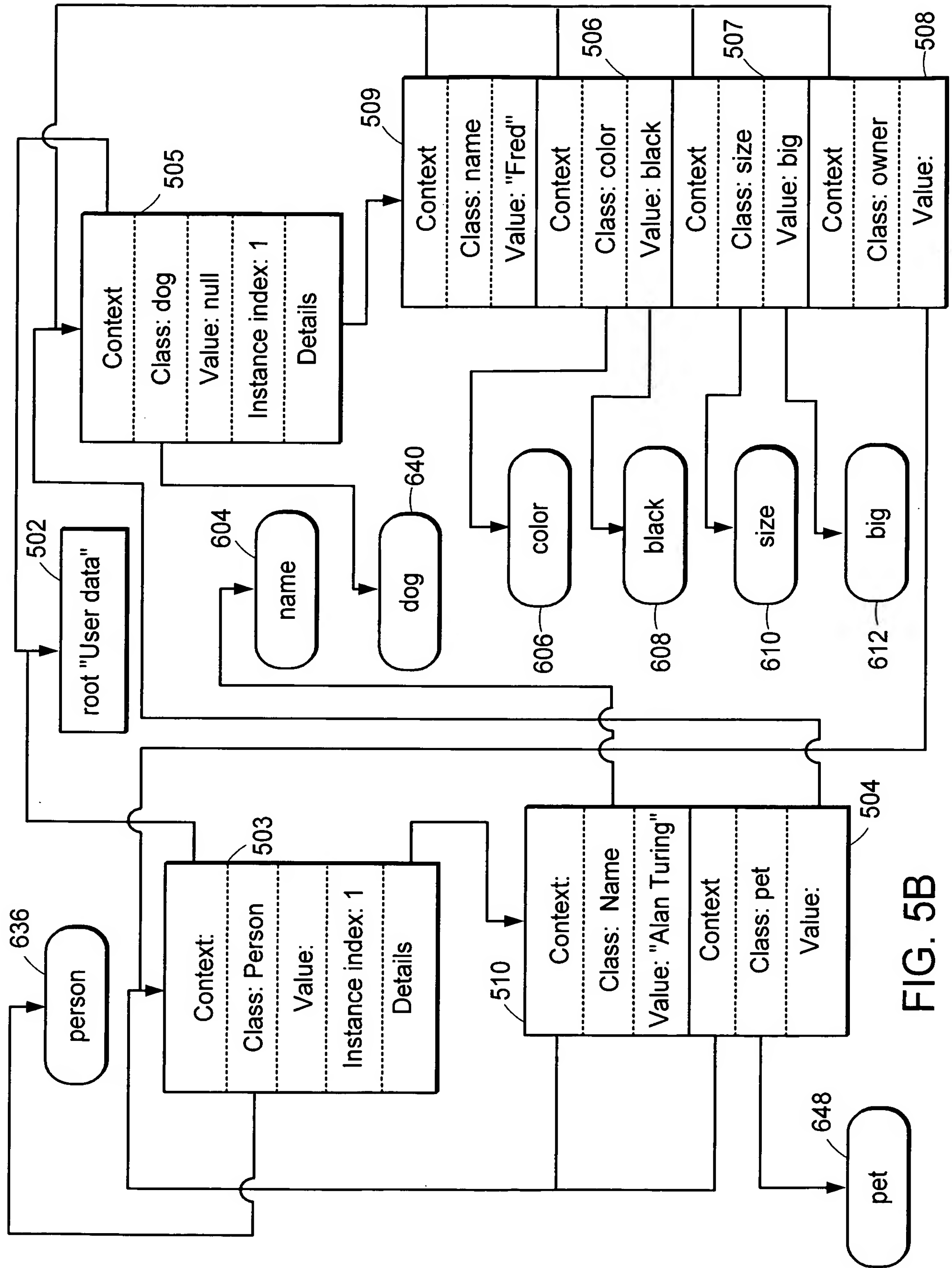


FIG. 5B

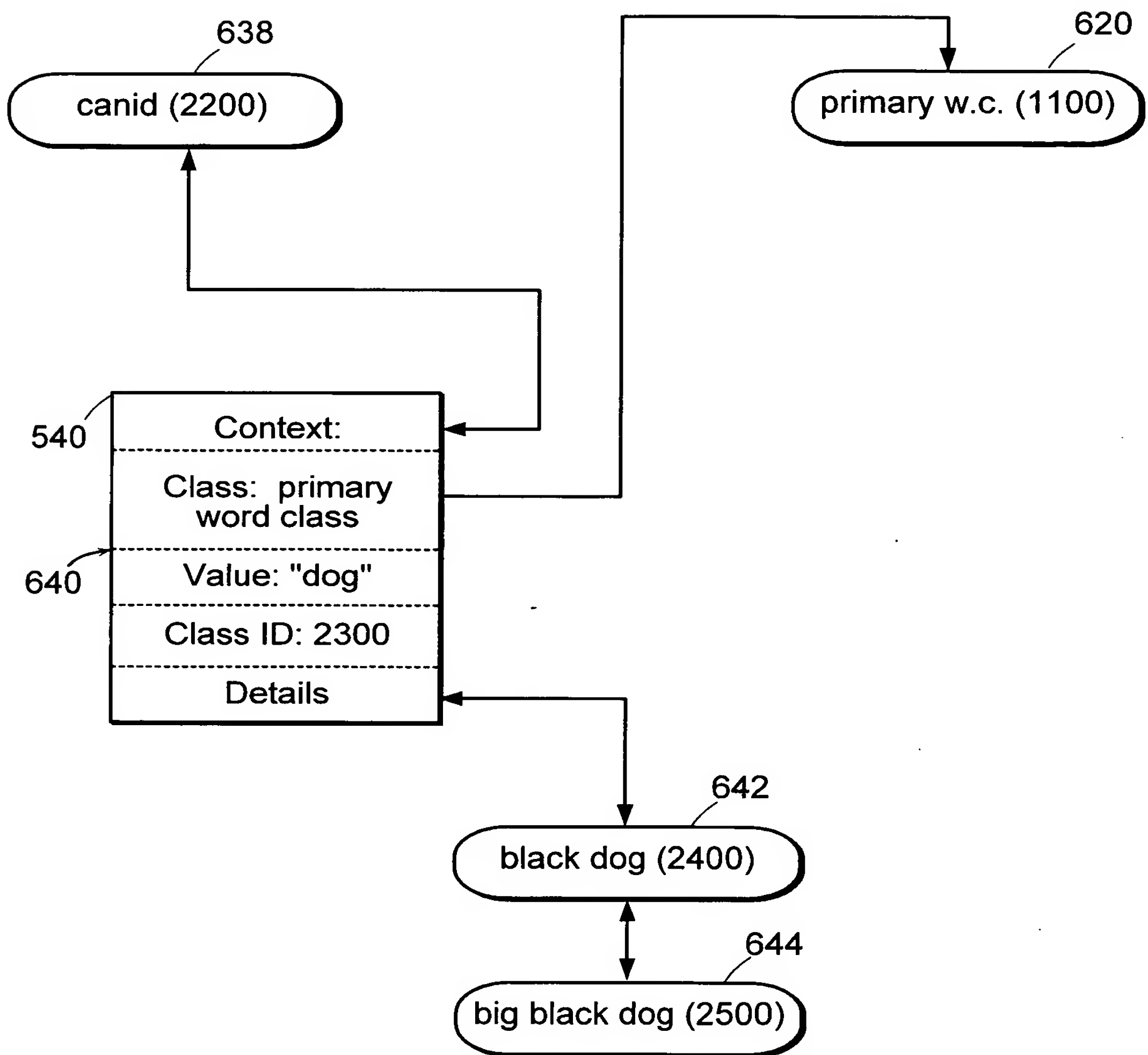


FIG. 5C



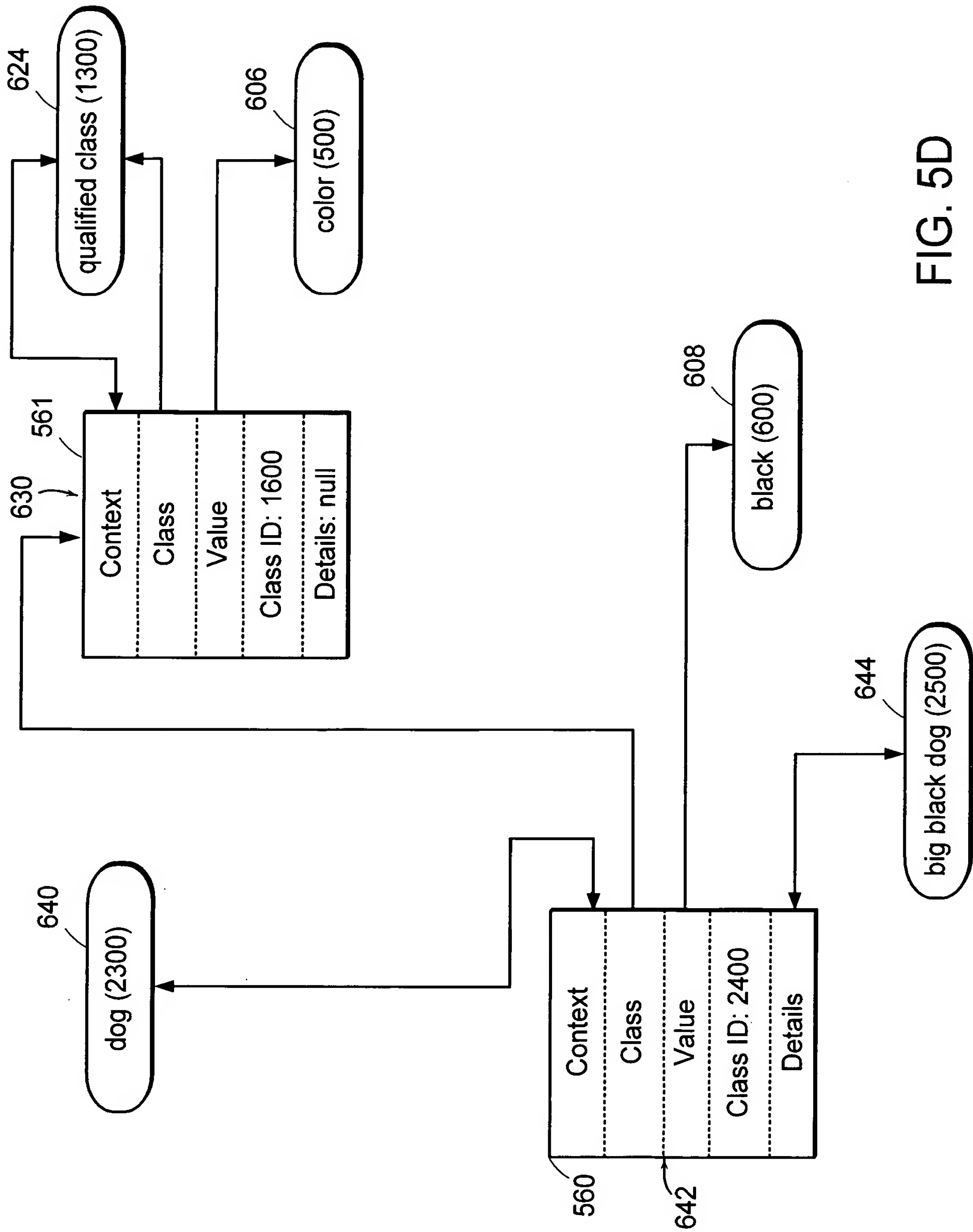


FIG. 5D

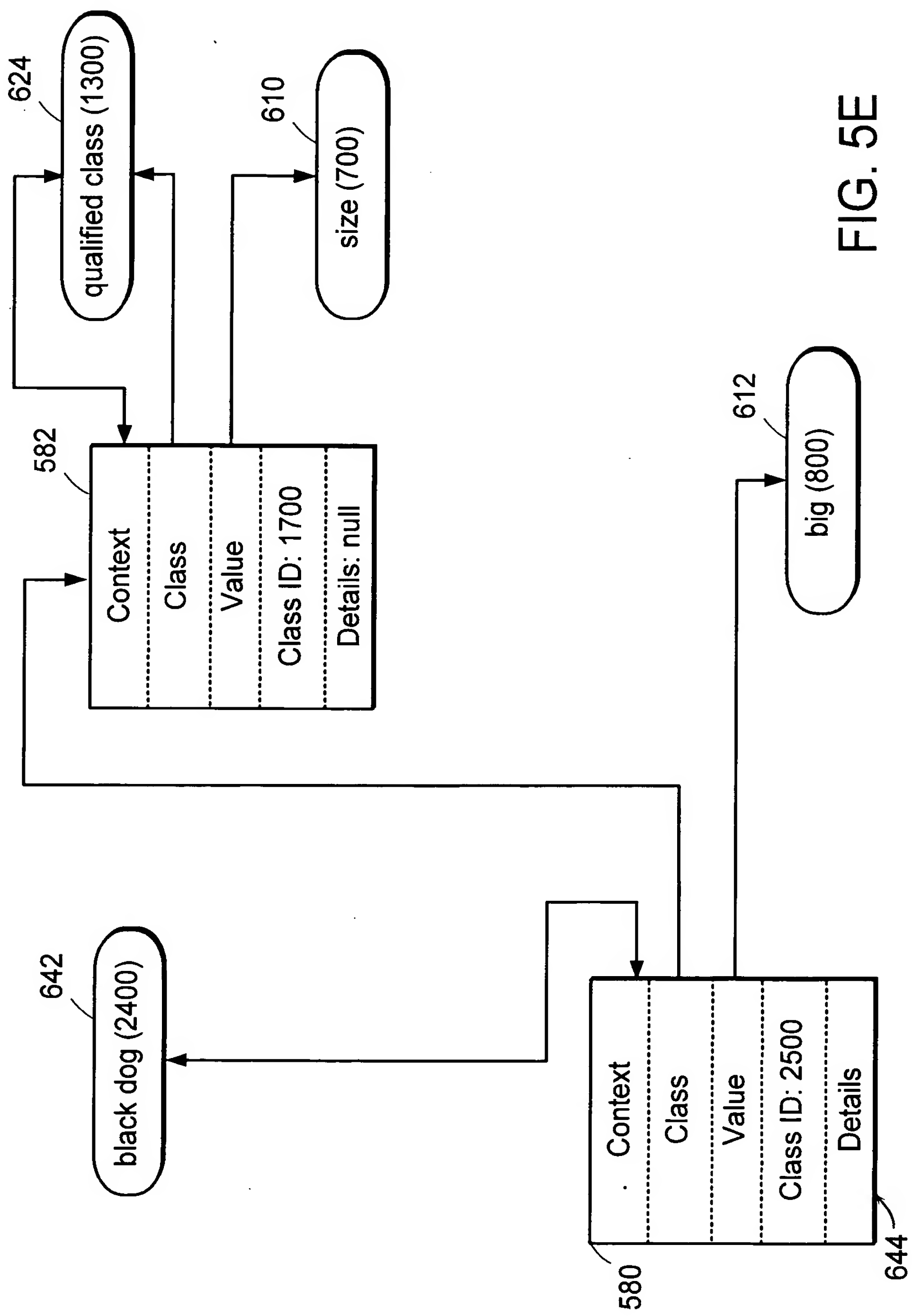


FIG. 5E

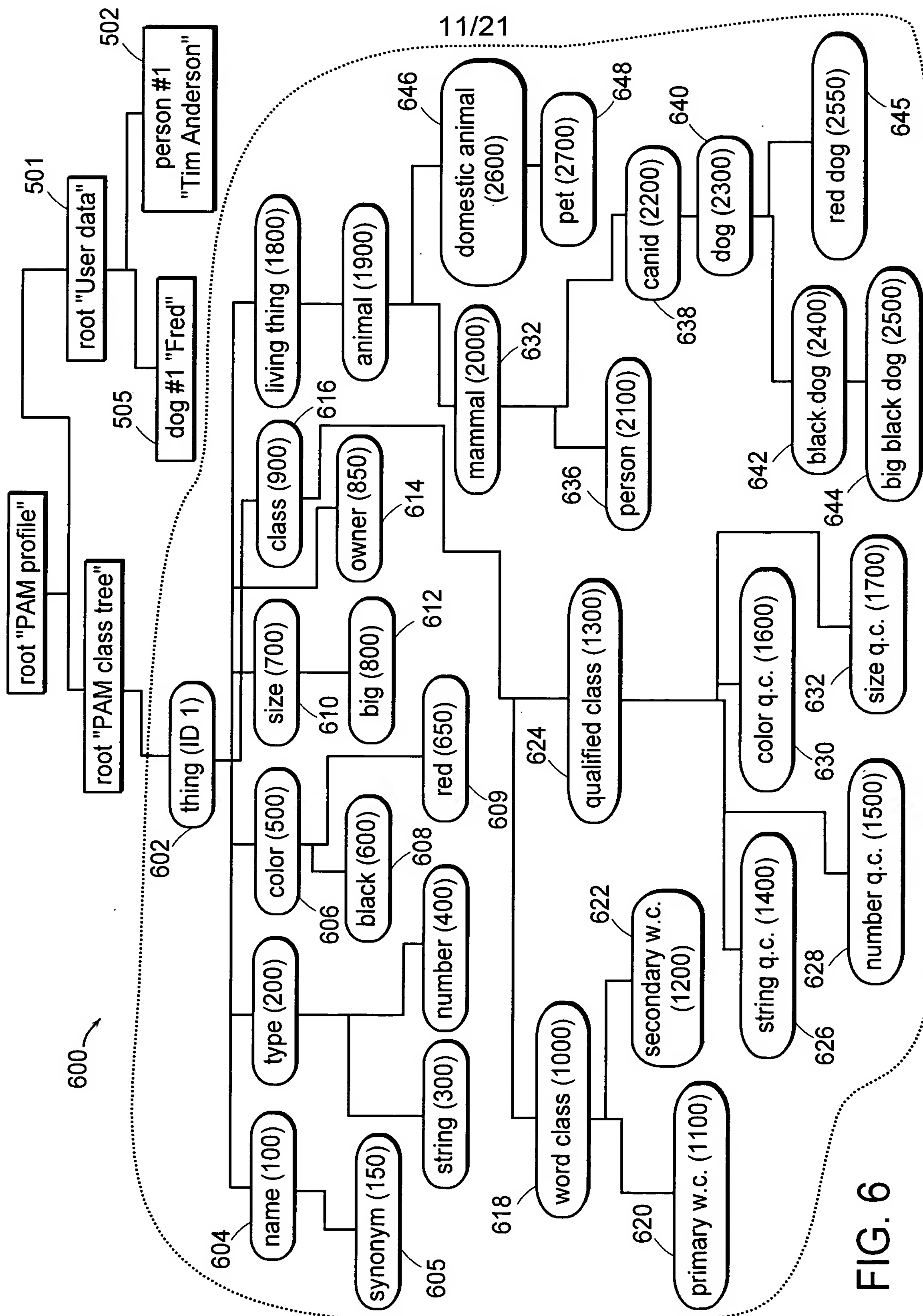


FIG. 6

12/21

```
root "PAM profile":
  root "PAM class tree":
    thing::
      organization::
        702 employer::
        704 inverse relation: employee
      role::
        706 employee::
        708 inverse relation: employer
      relation::
        inverse relation::
        inverse relation: inverse relation
      person::
        710 parent::
        712 father::
        714 sex: male
        716 inherited inverse relation: parent
        mother::
        sex: female
        inherited inverse relation: parent
        717 inverse relation: son
        target details:
        sex: male
        718 inverse relation: daughter
        720 target details:
        722 sex: female
        724 default inverse relation: child
        726 child::
        son::
        sex: male
        inherited inverse relation: child
        728 daughter::
        730 sex: female
        732 inherited inverse relation: child
        734 inverse relation: father
        736 target details:
        738 sex: male
        inverse relation: mother
        target details:
        sex: female
        740 default inverse relation: parent
```

FIG. 7

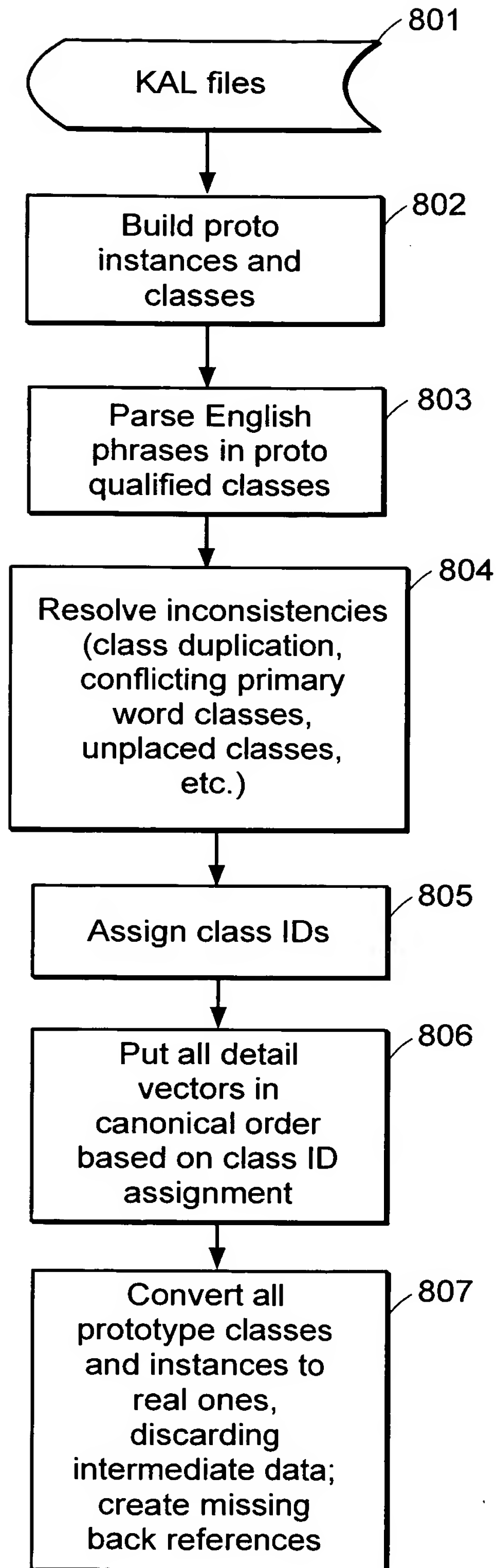


FIG. 8

```

root "PAM profile":
  root "PAM class tree":
    thing::
      name::
      type::
        string::
        number@type::
      color::
        qualifier: color
        black::
      size::
        qualifier: size
905      big::
906      synonym: "large"
    class::
      word class::
        primary word class::
        secondary word class::
      qualified class::
        string qualified class::
        number qualified class::
        color qualified class::
        size qualified class::
      action::
901      fly::
      living thing::
        animal::
          insect::
902          fly::
          mammal::
903          canid::
904          dog::
907          big black dog::
908          large black dog::

```

FIG. 9

```

root "PAM profile":
  root "PAM class tree":
    thing::
      name::
      type::
        string::
        number@type::
      color::
        qualifier: color
        black::
      size::
        qualifier: size
        big::
      living thing::
        animal::
          mammal::
            person::
            canid::
            dog::
1006          big dog::
1008          typical instance: big dog #1 "typical"
1010          domestic animal::
            pet::
              inverse relation: owner
  root "User data":
    person #1 "Alan Turing":
      pet: dog #1 "Fred"
1002  dog #1 "Fred":
      owner: person #1 "Alan Turing"
      color: black
1004      size:big
1012      big dog #1 "typical":
1014        weight: at least 90 pounds
1016      big dog "Tiny":

```

FIG. 10

```

root "PAM profile":
  root "PAM class tree":
    action::
1101    fly::
        living thing::
          animal::
            insect::
1102    fly@insect::

```

FIG. 11

```

root "PAM profile":
  root "PAM class tree":
    thing::
1202    name::
1204    synonym::
1206    variant::
1208    British variant::
1220    first name::
1222    last name::
1224    synonym: "surname"
1210    building accessory::
1212    elevator::
1213    British variant: "lift"
    ...
  root "User data":
1214    person #1 "Alan Turing":
        pet: dog #1 "Fred"
1216    first name: "Alan"
1218    last name: "Turing"
        dog #1 "Fred":
          owner: person #1 "Tim Anderson"
          color: black
          size: big

```

FIG. 12



```

root "PAM profile":
  root "PAM class tree":
    thing::
      vehicle::
        1302      car::
                  synonym: "automobile"
        1304      typical instance: car #1 "typical"
        1306      instance model:
        1308      important maker detail:
        1310      important model name detail:
        1312      important year detail:
        1314      mileage detail:
        1316      color detail:

root "User data"
  1318      person #1 "Alan Turing"
  1320      car: car #2
  1324      car #1 "typical":
  1326      number of wheels: 4
  1328      fuel: regular@gasoline
  1330      car #2:
  1332      maker: Honda
  1334      model name: "Civic Hybrid"
  1336      year: 2003
  1338      color: titanium

```

FIG. 13

```

root "PAM profile":
  root "PAM class tree":
    thing:: // class ID 1
    1402      A:: // class ID 2
    1404      A [B:1]:: // class ID 3
    1406      C:: // class ID 4
    1408      A [C:1]:: // class ID 5
    1410      B:: // class ID 6

```

FIG. 14

18/21

software manufacturer "SoftwareCo":

1502 holiday party #5:  
1504 calendar time: 7 pm #43  
duration: 5 hours  
location: hotel #1 "Charles"  
1506 holiday #104 "Christmas Day, 2002":  
1508 calendar time: day 25 #68  
1509 board@group:  
1510 meeting #87:  
1512 calendar time: 10.5 am #32  
1513 duration: 4.5 hours  
location: conference room #1 "board room"  
1514 calendar:  
1516 year 2002:  
1518 October:  
1520 day 30:  
1522 10.5 am #32:  
1524 calendar action: meeting #87  
1526 December:  
1528 day 6:  
1530 7 pm #43:  
1532 calendar action: holiday party #5  
1534 day 25 #68:  
1536 holiday #104:

FIG. 15

1602 person "Isabel":  
1604 typical Monday:  
1606 8 am:  
1608 calendar action: breakfast  
1610 9 am:  
calendar action: school  
1612 2 pm:  
calendar action: ballet  
1614 6.5 pm:  
calendar action: dinner  
1616 8.5 pm:  
1618 calendar action: bedtime  
1620 typical Tuesday:  
8.25 am  
calendar action: breakfast  
7 pm:  
calendar action: dinner  
8.5 pm:  
calendar action: bedtime

FIG. 16

```

root "PAM profile":
  root "PAM class tree":
    thing::
      name::
        synonym::
      type::
        string::
        number@type::
1702      instance type::
1704        alternative value: typical, model
1706      management status::
1708        alternative value: not managed, managed
      living thing::
        mammal::
1710          dog::
1712            model instance: dog #2 "model"
1714            dog:
1716              descriptor: typical
    root "User data":
1718      dog #1 "Fred":
        owner: person #1 "Alan Turing"
        color: black
        size:big
1720      descriptor: managed, primary, happy
1722      dog #2 "model":
1724      descriptor: not managed

```

FIG. 17

1802 car::  
1804 instance model:  
1806 important maker detail:  
1808 important model name detail:  
1810 important year detail:  
1812 management procedure:  
1814 step 1: ...  
step 2: ...

1816 prescription::  
1818 instance model:  
1820 important medication detail:  
1822 important dosage detail:  
1824 important frequency detail:  
1826 important prescriber detail:  
1828 important rx number detail:  
1830 important fill date detail:  
1832 management procedure:  
step 1: ...  
step 2: ...  
step 3: ...

1834 person #39 "Mary Smith":  
1836 descriptor: client  
1838 car #77:  
1840 maker: manufacturer #57 "Honda":  
1842 model name: "Civic"  
1844 year: 1998  
1846 prescription #18:  
1848 medication: drug #56 "Lipitor"  
1850 dosage: 10 mg  
1852 frequency: daily  
1854 prescriber: doctor #91 "John Compton"  
1856 rx number: 2461357  
1858 fill date: 28 October 2002  
expiration date: 28 October 2003

FIG. 18A

1834	person #39 "Mary Smith":
1836	descriptor: client
1838	car #77:
	maker: manufacturer #57 "Honda":
	model name: "Civic"
	year: 1998
1860	management #38:
1862	calendar time: hour #597
1846	prescription #18:
	medication: drug #56 "Lipitor"
	dosage: 10 mg
	frequency: daily
	prescriber: doctor #91 "John Compton"
	rx number: 2461357
	fill date: 28 October 2002
	expiration date: 28 October 2003
1864	management #44:
1866	calendar time: hour #241

FIG. 18B